

REMARKS

The necessary formal change in claim 7 is made herewith.

Claim 1 has been amended to sharpen its definition of the invention relative to the cited references.

Accordingly, reconsideration is respectfully requested, for the rejection of certain of the claims as anticipated by BECHTOLD et al. 5,092,842.

The present invention is concerned with a mechanism for operating a standard medical injection device as explained in paragraph one of the text for this application. This standard type of device is provided with a sliding trigger on one side of a barrel-like body which can be operated to achieve automatic firing of an injector so as to eject a dose from the needle. The trigger is normally held back by a stiff spring. The trigger, when operated, releases a spring within the barrel-like body which shoots a plunger forwards so that it acts upon the piston within a capsule carrying the dose to be injected. The BECHTOLD arrangement is essentially one of these standard injection devices. It has a capsule 12 incorporating a dose to be injected, a piston 17, which is operated on by a plunger 18 and there is an internal spring 105 which, when released, shoots the plunger 18 forwards to act upon the piston 17. The trigger in this arrangement comprises a clip 11 which can be pressed

inwardly to release the mechanism which normally holds the drive spring 105 in a compressed condition. Consequently, the only real difference between the BECHTOLD device and the type of standard injection device referred to in paragraph one of the text of this application is that the BECHTOLD trigger is pressed inwardly to release the spring, whereas in the standard device referred to in this application the trigger is slid down the body in order to release the compressed drive spring. This difference is of no great significance.

The invention is not concerned as such with these standard injection devices themselves, but rather with an enclosing mechanism comprising a housing within which the standard injection device is installed. The housing of the invention has an internal mechanism which carries out two sequential steps. An external accessible operating element is pressed inwardly of the housing member and releases an internal spring within the housing member itself to cause the whole injection device to be shot forwards so that the needle projects from the housing member (and pierces the skin of a patient against which the housing member has previously been placed). The second stage of operation is that, after the standard injection device has been sprung forward, the trigger on the standard injection device is actuated so as to release the drive spring acting on the plunger of the injection device itself so

that the piston is pushed forwards to cause the dose to be ejected.

In the drawings the standard injection device 1 is shown entirely cross-hatched and no operating details are thus illustrated. The general features of this injection device are however disclosed, in particular, in paragraph one of the text of the specification. Because the whole of the standard injection device is shown cross-hatched, the nature of the trigger 4 is not immediately obvious. What is shown are the ridges of the trigger which would enable a user to grip and push the trigger if the standard injection device were used on its own. It will be appreciated that the trigger 4 is a separate part of the mechanism, which is intended to be pushed downwardly towards the needle end relative to the body of the injector so as to release the actuating spring which acts on the plunger within the standard injection device. The standard injection device of this nature is, of course, well known and an example can be seen from U.S. Patent No. 5,104,380, a copy of which is attached hereto. Because the invention does not relate as such to the standard injection device, the design features of the standard injection device are not relevant, apart from the fact that a trigger is present on the side of the body of the injection device. For simplicity, the drawings have therefore omitted all structural details of the standard injection device and merely show the

design features of the external housing member and the operating mechanism thereof which constitutes this invention.

Claim 1 has been amended to define in more detail the general nature of the standard type of injection device for which the present invention is suited. The invention itself, however, relates just to the firing device comprising the cylindrical housing and the operating mechanism within that housing which acts upon the standard injection device so that it operates in the manner as described above.

From the above it will be clear that the BECHTOLD device does not in any way illustrate the device of the invention. Rather the BECHTOLD device constitutes one of the standard type of injection devices which are suitable for use with the firing device of this invention. The BECHTOLD device does not disclose any features of an additional external firing device which can be used to actuate the BECHTOLD injection device.

Respectfully submitted,

YOUNG & THOMPSON



Robert J. Patch, Reg. No. 17,355
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

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APPENDIX:

The Appendix includes the following item:

- copy of U.S. Patent No. 5,104,380